What is claimed is:

1. An immunogenic composition comprising

(a) a polypeptide or peptide selected from the group consisting of

i. the polypeptide of SEQ ID NO: 2, a homolog thereof, or a fragment thereof of at least eight consecutive amino acids in length, which induces antibodies to *N. gonorrhoeae* in a mammalian subject; and

ii. a homolog of SEQ ID NO: 4, or a fragment thereof of at least eight consecutive amino acids in length, which induces antibodies to *N. gonorrhoeae* in a mammalian subject; and

(b) a pharmaceutically acceptable carrier.

2. The composition according to claim 1, wherein said polypeptide (a) is a sequence that contains one to four conservative amino acid replacements in the amino acid sequence of SEQ ID NO: 2 or 4.

3. The composition according to claim 1, wherein said polypeptide (a) is a homolog having at least 85% identity with the sequence of SEQ ID NO: 2 or 4.

4. The composition according to claim 1, wherein said polypeptide or peptide is fused to a second polypeptide or protein.

5. The composition according to claim 4, wherein said second polypeptide or protein is an antigen or fragment thereof from a heterologous pathogenic species or a homologous pathogenic species.

6. The composition according to claim 1, wherein said fragment comprises an amino acid sequence within amino acids 720 to 745 of SEQ ID NO: 2 or 4.

7. The composition according to claim 1, wherein said fragment comprises an amino acid sequence within amino acids 1 to 178 of SEQ ID NO: 2 or 4.

8. An immunogenic composition comprising:

(a) a nucleic acid sequence selected from the group consisting of

i. a nucleic acid sequence of SEQ ID NO: 1, a sequence capable of hybridizing thereto under stringent conditions, or a fragment thereof, which, when expressed in a host cell, produces a polypeptide that induces antibodies to *N. gonorrhoeae,*

ii. a nucleic acid sequence of SEQ ID NO: 3, a sequence capable of hybridizing thereto under stringent conditions, or a fragment thereof, which, when expressed in a host cell, produces a polypeptide that induces antibodies to *N. meningitidis*; and

(b) a pharmaceutically acceptable carrier.

9. The composition according to claim 8, wherein said nucleic acid sequence has at least 85% identity with the sequence of SEQ ID NO: 1 or 3.

10. The composition according to claim 8, wherein said nucleic acid sequence encoding said polypeptide is fused to a second nucleic acid sequence encoding a second polypeptide or protein.

12. The composition according to claim 8, further comprising a suitable nucleic acid delivery vehicle.

13. The composition according to claim 10, wherein said second polypeptide is at least one other antigen or fragment thereof from a heterologous pathogenic species or a homologous pathogenic species.

14. The composition according to claim 8, wherein said fragment encodes an amino acid sequence within amino acids 720 to 745 of SEQ ID NO: 2 or 4.

15. The composition according to claim 8, wherein said fragment encodes an amino acid sequence within amino acids 1-178 of SEQ ID NO: 2 or 4.

16. A diagnostic composition comprising at least one component selected from the group consisting of

(a) the polypeptide of SEQ ID NO: 2, a homolog thereof, or a fragment thereof of at least eight consecutive amino acids in length, which induces antibodies to *N. gonorrhoeae* in a mammalian subject;

(b) the polypeptide of SEQ ID NO: 4, a homolog thereof, or a fragment thereof of at least eight consecutive amino acids in length, which induces antibodies to *N. gonorrhoeae* in a mammalian subject;

(c) a nucleic acid sequence of SEQ ID NO: 1, a sequence capable of hybridizing thereto under stringent conditions, or a fragment thereof, which, when expressed in a host cell, produces a polypeptide that induces antibodies to *N. gonorrhoeae*,

(d) a nucleic acid sequence of SEQ ID NO: 3, a sequence capable of hybridizing thereto under stringent conditions, or a fragment thereof, which, when expressed in a host cell, produces a polypeptide that induces antibodies to *N. meningitidis*; and

(e) a polypeptide of (a) or (b) that contains, or a nucleic acid sequence of (c) or (d) that encodes, one to four conservative amino acid replacements in the amino acid sequence of SEQ ID NO: 2 or 4;

(f) a polypeptide of (a) or (b) that contains, or a nucleic acid sequence of (c) or (d) that encodes, a polypeptide that has at least 85% identity with the sequence of SEQ ID NO: 2 or 4;

(g) a polypeptide of (a) or (b) that contains, or a nucleic acid sequence of (c) or (d) that encodes, a second polypeptide or protein;

(h) a polypeptide fragment of (a) or (b) that contains, or a nucleic acid sequence of (c) or (d) that encodes, a peptide fragment that comprises an amino acid sequence within amino acids 720 to 745 of SEQ ID NO: 2 or 4;

(i) a polypeptide of (a) or (b) that contains, or a nucleic acid sequence of (c) or (d) that encodes, a peptide fragment that comprises an amino acid sequence within amino acids 1 to 178 of of SEQ ID NO: 2 or 4; and

a suitable detectable label or detection system associated therewith.

17. The compositions according to claim 16, which is a diagnostic reagent.

18. The composition according to claim 16, with is a diagnostic kit.

18. A nucleic acid molecule comprising (a) a nucleic acid sequence of SEQ ID NO: 1, a sequence capable of hybridizing thereto under stringent conditions, or a fragment thereof, which, when expressed in a host cell, produces a polypeptide that induces antibodies to *N. gonorrhoeae,* or (b) a nucleic acid sequence of SEQ ID NO: 3, a sequence capable of hybridizing thereto under stringent conditions, or a fragment thereof, which, when expressed in a host cell, produces a polypeptide that induces antibodies to *N. meningitidis*, under the control of suitable regulatory seuqences which direct expression of said polypeptide in said host cell.

19. A host cell transformed with the molecule of claim 18.